



Claims

1. A 5'OT-EST polypeptide having a sequence selected from the group comprising the sequences set forth in any one of SEQ. ID. Nos. 2, 4 or 6, and sequences substantially homologous to any one of the polypeptides set forth in SEQ. ID. Nos. 2, 4 or 6.
2. The polypeptide of claim 1 comprising an amino acid sequence encoded by at least one exon selected from the group consisting of exons w, x, y and z as set forth in SEQ. ID. No. 16, or equivalents thereof as set forth in any one of SEQ. ID. Nos. 3 or 5.
3. The polypeptide of claim 2, which comprises an amino acid sequence encoded by at least part of exon w as set forth in SEQ. ID. No. 16, or equivalents thereof as set forth in any one of SEQ. ID. Nos. 3 or 5.
4. A mutant of a 5'OT-EST polypeptide according to any one of claims 1-3 which, in vivo, of modulates the obesity of an animal expressing it.
5. A mutant of any one of claims 1-7 claim 4, wherein the animal is a transgenic animal expressing the mutant as a result of transformation with a transgene.
6. A mutant of any one of claims 1-7 claim 4 or claim 5, which comprises the sequence with SEQ ID No. 37 PRPRSFSAPFSSQDS, or a sequence substantially homologous thereto.
7. A mutant of any one of claims 1-7 any one of claims 4 to 6 which comprises the sequence with SEQ ID No. 30 MLRALNRLAARPGGQPPTLLLLPVRGPRPRSFSAPFSSQDS, or a sequence substantially homologous thereto.
8. A nucleic acid encoding a 5'OT-EST polypeptide or mutant 5'OT-EST polypeptide of any one of claims 1-7.
9. A nucleic acid of any one of claims 1-7 claim 8, having a sequence selected from the group consisting of any one of SEQ. ID. Nos. 1, 3, 5, 7, 16 or 17; sequences which are hybridisable under stringent conditions with an oligonucleotide comprising 20 contiguous bases from any one of SEQ. ID. Nos. 1, 3, 5, 7, 16 or 17; sequences substantially homologous to any one of SEQ. ID. Nos. 1, 3, 5, 7, 16 or 17; and sequences complementary thereto.
10. A nucleic acid of any one of claims 1-7 claim 9, comprising the sequence with SEQ ID No. 31
ATGTTGCGGGCTTTGAACCGCCTGGCCGCGCGGCCCGGGGGCCAGCCCCCAACCCT
GCTCCTTCTGCCCGTGCGCGGCCACGGCCCCGCTCATTCTCGGCTCCTTTTTCCTCG
CAGGATAGC, or an equivalent sequence which encodes the same polypeptide having regard to the degeneracy of the nucleic acid code, or a sequence substantially homologous thereto.
11. A nucleic acid vector comprising a nucleic acid sequence of any one of the claims 8 to 11.